

CLAIMS

1. Hollow molded part made of a metallic material and produced out of a mold blank by inner high pressure metal forming and having a closed cross-section and a reinforcement characterized in that the hollow molded part is formed as a single piece and exhibits a blank mold, wherein the blank mold is furnished

-with a first region (1) with a first starting outer diameter (D1) and a starting wall thickness (b1), and

- with at least one second region (2) with an outer diameter reduced in comparison to the starting outer diameter (D1) and with an increased wall thickness in comparison to the starting wall thickness (b1), wherein the increased wall thickness forms a reinforcement.

2. Hollow molded part according to claim 1 characterized in that the second region (2) narrows down.

3. Hollow molded part according to claim 2 characterized that the second region (2) narrows conically.

4. Hollow molded part according to claim 1, characterized in that a third cylindrical region (3) follows to the second region (2), wherein the third cylindrical region (3) exhibits a reduced diameter (D2) in comparison to the starting outer diameter (D1) and wherein the wall thickness (b2) of the third cylindrical region (3) is equal, increased or decreased relative to the starting wall thickness (b1) of the first region (1).

5. Hollow molded part according to claim 1 characterized in that the hollow molded part is bent in the second region (2).

6. Hollow molded part according to claim 1 characterized in that second conical region (2) and a third region (3) are reduced in the diameter (D2) in comparison to the first region (1) by a radial or tangential deformation method.

7. Hollow molded part according to claim 6 characterized in that the second conical region (2) and/or the third region (3) are reduced by hammering, forging swaging, rotary kneading, rolling, flow turning, or stretch forming in their outer diameter.

8. Hollow molded part according to claim 1, characterized in that in each the case a first region (1) and a second region (2) alternate.

9. Hollow molded part according to claim 8 characterized in that in each case a first region (1) and a second region (2) and a further first region (1) and a further second region (2) are disposed like mirror images to each other.

10. Hollow molded part according to claim 1 characterized in that in each case the first region (1), the second region (2), and a third region (3) are joining to a further first region (1), a further second region (2), and a further third region (3).

11. Hollow molded part according to claim 1 characterized in that in each case the first region (1), the second region (2), and a third region (3) and a further first region (1), a further second region (2), and a further third region (3) are disposed to each other like mirror images.

12. Method for production of a hollow molded part made of a metallic material and produced out of a tubular starting part (A) having a starting outer diameter (D1) and a starting wall thickness (b1), characterized in that

initially the tubular starting part (A) is reduced by a radial or tangential deformation method over at least a second region (2) conically with an angle (α) and over at least a third region (3) cylindrically to a smaller diameter (D2) and therewith a mold blank

(V) having an increased wall thickness (b2) relative to the starting wall thickness (b1) in the second region (2) and in the third region (3) and that in the following the hollow form part is formed by inner high pressure metal forming of the mold blank in the first region and/or in the second region.

13. The method according to claim 12 characterized in that a bending of the mold blank is performed between the step of the radial or tangential deformation method and the step of inner high pressure metal forming.

14. The method according to claim 12 characterized in that an intermediate annealing of the mold blank is performed prior to the inner high pressure metal forming.

15. The method according to claim 12 characterized in that an intermediate annealing of the mold blank is performed between the step of the radial or tangential deformation method and the step of inner high pressure metal forming.

16. The method according to claim 12 characterized in that the step of the radial or tangential deformation is performed by hammering, forging swaging, rotary kneading, rolling, flow turning, or stretch forming.

17. A method for production of a hollow molded part comprising forming a tubular starting part (A) having a starting outer diameter (D1) and a starting wall thickness (b1) out of a metallic material; initially reducing the tubular starting part (A) by a radial or tangential deformation method over at least a second region (2) conically with an angle (α) and over at least a third region (3) cylindrically to a smaller diameter (D2); generating a mold blank (V) having an increased wall thickness (b2) relative to the starting wall thickness (b1) in the second region (2) and in the third region (3); forming in the following a hollow form part by inner high pressure metal forming of the mold blank in a first region and/or in the second region.